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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,275	05/16/2002	Masahiro Serizawa	G0126.0213	3300

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DICKSTEIN SHAPIRO LLP
1633 Broadway
NEW YORK, NY 10019

EXAMINER

WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
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2626

MAIL DATE	DELIVERY MODE
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11/06/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/980,275	Applicant(s) SERIZAWA ET AL.	
	Examiner JAMES S. WOZNAK	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44, 46-67 and 69-88 is/are pending in the application.
- 4a) Of the above claim(s) 2-15, 17-21, 23-27, 29-33, 35-50, 52-56, 58-67, 69-73, 75-78, 80-83, and 85-88 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 16, 22, 28, 34, 51, 57, 74, 79 and 84 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species 1 (*Claims 1, 16, 22, 28, 34, 51, 57, 74, 79, and 84*) in the reply filed on 8/5/2009 is acknowledged.

2. Claims 2-15, 17-21, 23-27, 29-33, 35-50, 52-56, 58-67, 69-73, 75-78, 80-83, and 85-88 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 8/5/2009.

Response to Amendment

3. In the amendment filed 4/13/2009, the applicant amended independent claims 1, 34, and 57, while arguing to traverse the art rejection based on the limitation regarding smoothing over a plurality of preceding frames (*Amendment, Page 27*). The applicant's arguments have been fully considered but are moot with respect to the new grounds of rejection further in view of Saikaly et al (*U.S. Patent: 5,893,056*).

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4. In response to the addition of the detecting circuit/step to claims 1, 34, and 57 (*Amendment, Pages 24-25*), the examiner has withdrawn the previous 35 U.S.C. 112, second paragraph rejections directed towards missing elements/steps.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1, 22, 28, 34, 51, 57, 7, 79, and 84** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayata (*EP 0751490A2*) in view of Saikaly et al (*U.S. Patent: 5,893,056*).

With respect to **Claim 1**, Hayata discloses:

A voice/voice-less detecting circuit for detecting if said speech signals are classified as a voice period or a voice-less period (*determination unit for discerning between speech and non-speech states, Col. 4, Line 54- Col. 5, Line 20*); and

A voice-less decoding circuit for decoding a current frame of the speech signals in said voice-less period (*non-voice decoder, Col. 4, Line 54- Col. 5, Line 20*), the voice-less decoding circuit performing said decoding by smoothing said feature parameter for spectral envelope characteristics (*Col. 5, Lines 21-54; and Col. 8, Lines 21-55*), and synthesizing said speech signals of said current frame based on said smoothed feature parameter for spectral envelope characteristics (*synthesizing a smoothed background noise portion, Col. 7, Lines 39-58*).

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Although Hayata teaches a similar non-voice decoder to the claimed invention that utilizes smoothing, Hayata does not explicitly teach smoothing over a plurality of preceding frames or the common use of gain in generating a speech output. Saikaly, however, recites that in the absence of speech or a non-speech period smoothing is performing by averaging over a number of previous frames (*Col. 3, Lines 44-58; and Col. 4, Lines 42-56*) and notes gain factors common to speech signal coding/reconstruction (*Col. 1, Lines 30-32*).

Hayata and Saikaly are analogous art because they are from a similar field of endeavor in non-speech signal processing. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Hayata with the averaging of previous frames taught by Saikaly in order to provide more natural and continuous sounding background noise (*Saikaly, Col. 3, Lines 1-4*).

With respect to **Claim 22**, Hayata discloses a representation of a spectrum envelope (*Col. 5, Lines 21-37*), while Saikaly discloses the gain parameter as applied to claim 1.

With respect to **Claim 28**, Hayata further discloses:

Speech decoding device being included in a speech coding/decoding device with a coding device which determines whether the input signal is in a voice period or in a voice-less period for each frame and encodes the feature parameters of the input signals to output (*decoder included in a speech encoding/decoding communication system, wherein an encoder detects speech//non-speech and encodes an input speech signal, Col. 1, Lines 5-49*).

Apparatus claim 1 and method **Claim 34** are related as apparatus and the method of using same, with each claimed element's function corresponding to the claimed method step.

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Accordingly claim 34 is similarly rejected under the same rationale as applied above with respect to apparatus claim 1.

Claim 51 contains subject matter similar in scope to Claim 22, and thus, is rejected under similar rationale.

Claim 57 contains subject matter similar in scope to Claim 34, and thus, is rejected under similar rationale. Also, Saikaly discloses speech processing implementation as a program stored on a computer readable medium and executed by a computer processor (*Col. 3, Lines 33-43*).

With respect to **Claims 74, 79, and 84**, Hayata further discloses:

Smoothing in a subsequent period is performed even when a new feature parameter is not received (*smoothing over time as voice inactivity continues, Col. 7, Line 59- Col. 8, Line 4; and Col. 9, Lines 25-35*).

7. **Claims 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayata in view of Saikaly et al (*U.S. Patent: 5,893,056*) and further in view of Jarvinen et al (*U.S. Patent: 5,960,389*).

With respect to **Claims 16**, Hayata in view of Saikaly discloses the background noise decoder as applied to Claim 1. Hayata in view of Saikaly does not specifically suggest that when a length of a voice period immediately before a first voice-less period is shorter than a predetermined length, a value of a feature parameter which is finally transmitted in a second voice-less period immediately before the voice period is used as an initial value of smoothing. Jarvinen, however recites utilizing a previous noise parameter for smoothing upon the

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occurrence of a short speech burst (*Col. 21, Lines 16-35; Col. 15, Lines 19-46; and Col. 2, Lines 28-43*).

Hayata, Saikaly, and Jarvinen are analogous art because they are from a similar field of endeavor in non-speech signal processing. Thus, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the teachings of Hayata in view of Saikaly with the concept of addressing a short speech burst taught by Jarvinen in order to prevent a speech burst from being misinterpreted as a background noise spike (*Jarvinen, Col. 14, Line 60-Col. 15, Line 3*).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: PTO-892.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached at (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/James S. Wozniak/
Primary Examiner, Art Unit 2626